

## **SECTION VI: MUNICIPAL INFRASTRUCTURE**

Kamloops residents enjoy a high level of municipal services, which contribute significantly to our quality of life. To a large extent, this is a result of the planning and infrastructure development carried out in the 1970s and early 1980s, followed by extension of services to Barnhartvale and Westsyde in the early 1990s. In the spring of 2003, construction began on the Water Treatment Plant on River Street, which will use membrane filtration technology, making it one of the most advanced treatment facilities in North America.

Funding constraints and environmental stewardship principles are placing greater emphasis on cost-effective delivery of services and increased conservation measures. Increased levels of regulation by senior levels of government raise concerns about environmental liability.

### **1.0 GENERAL SERVICING STRATEGY**

#### **GOAL**

- To provide a high level of services in a cost-effective and efficient manner, balancing demands with affordability.

#### **General Servicing Policies**

- 1.1 The City will favour infill over peripheral development and will pursue strategies designed to encourage maximum utilization of existing service systems prior to expansion.
- 1.2 The City will encourage the development of a more compact and efficient land use and servicing system emphasizing intensification and higher densities, energy conservation, environmental sustainability, and fiscal responsibility.
- 1.3 The City will continue to emphasize conservation and the reduction of waste through educational and promotional campaigns, such as WaterSmart, and through the provision of facilities such as the McGill Road yard waste and Cinnamon Ridge composting site and the recycling depots throughout the City.
- 1.4 The City will continue to develop demand management strategies to defer or reduce the costs of infrastructure growth.
- 1.5 The City will use development cost charges to offset costs arising from new growth and the need to expand City services and infrastructure. Further, the City will review development cost charges to determine:
  - their impact on development and the financing of services;
  - their competitiveness with other municipalities;

- their ability to further planning objectives; and
  - the appropriateness of charging DCCs based on:
    - ▶ the impact of development,
    - ▶ the size/value of development, and
    - ▶ community/public facilities vs private/commercial.
- 1.6 The City will continue to pursue innovative methods of providing infrastructure including the use of new technologies and alternative financing approaches (e.g. public/private partnerships). User fees, service charges, and developer contributions (development cost charges, works and services provisions, latecomer agreements) will be considered viable means of assisting with the financing of future improvements.
- 1.7 The City will maintain existing service levels and improve where feasible, using formal infrastructure planning and the five-year capital budget as priority setting/evaluation tools.
- 1.8 The City's amalgamation in 1973 has resulted in different neighbourhoods in the City having different infrastructure standards and service levels for services such as street lights, sidewalks, drainage, and parks. The City recognizes that neighbourhoods will continue to have different standards and levels of service, although retrofitting will be considered on a limited basis for high priority areas through initiatives such as Safer City or in areas experiencing significant redevelopment through infill and intensification. New development will be required to meet current standards.
- 1.9 Upgrading of local infrastructure beyond current service levels will generally proceed through use of local improvement provisions where the primary benefiting parties are the landowners who live adjacent to the local improvement. The cost sharing formula between benefiting landowners and the City will be determined by City Council and established in the local improvement by-law from time to time. Upgrades resulting from health, safety, or emergency concerns may require different cost sharing formulae. The City will continue to pursue cost sharing with the senior governments, recognizing that grant reductions will continue.
- 1.10 New developments will be required at the time of subdivision approval or Building Permit issuance to provide works and services in accordance with the following general standards:

1.10.1 Urban Areas (includes the principal residential areas of Kamloops)

Full urban services including:

- sanitary sewers,
- water mains,
- storm sewers,
- underground utilities (discretionary in small-scale infill situations where general area is overhead wiring),
- paved streets with curb, gutter, sidewalks, and walkways, and
- street lighting.

1.10.2 Suburban Areas (includes Rayleigh, Heffley Creek, Rose Hill, Viking Estates, Dallas, and central Barnhartvale)

Full urban services as above, except that where the local standard of servicing does not include urban infrastructure, the City may exercise discretion. For example, in areas where no communal sanitary sewer exists, septic tank disposal of effluent would be permitted subject to health approval.

1.10.3 Rural Areas (includes Knutsford, Iron Mask, south and east Barnhartvale, Karindale, and Noble Creek)

Rural services including:

- septic tank disposal,
- water mains; wells on large lots (2 ha or greater),
- open ditching,
- overhead wiring, and
- paved streets.

Specific standards and guidelines are contained in the Subdivision Control By-law and the City's Design Manual.

## 2.0 TRANSPORTATION

Kamloops is located at the intersection of three major highways: the Trans Canada, the Coquihalla, and the Yellowhead. In 1962, the Trans Canada Highway was opened over Roger's Pass, linking Kamloops to the rest of Canada. At that time, the highway passed through Kamloops on what is now Columbia Street. In 1973, the bypass was built, providing the opportunity to increase highway, commercial, and tourist accommodation development in Valleyview and the Southwest Sectors. A further bypass is currently under consideration that would bypass the Valleyview neighbourhood, leaving the existing highway in the

vicinity of Holman Road and climbing onto the bench to the south of Valleyview, connecting back into the current alignment of the highway just east of Peterson Creek.

The Yellowhead route, including the Yellowhead Bridge over the South Thompson River, was built in 1967 connecting Kamloops to Edmonton along the North Thompson River valley.

The City is bisected by the Thompson River system, and the creation of a viable road network is constrained by the topographic constraints of a valley location. Despite these constraints, residents of Kamloops enjoy a high level of mobility and short travel times to destinations throughout the City.

The City of Kamloops integrates its land use and transportation planning functions through *TravelSmart (1999)*. This has been supplemented in recent years by work under the Safer City Program including the *Pedestrian Master Plan (2002)* and the *Bicycle Master Plan (2002)*. The City of Kamloops in collaboration with the Insurance Corporation of BC (ICBC), initiated the Kamloops Safer City program in 2001. The goal of this program is to significantly improve road safety in Kamloops through integrated transportation, engineering, traffic enforcement, and education programs. The primary partners in Kamloops Safer City Program are the City's Development and Engineering Services Department, ICBC, and the RCMP. Kamloops' experience is serving as a model for a number of other communities in BC that have commenced Safer City initiatives.

As a backdrop to this pioneering effort, it is valuable to understand the importance of road safety in our community. Over the four-year period (1999-2002), there was an average of \$18 million in insurance claims per year relating to vehicle accidents in Kamloops. Four fatalities occurred, over 700 injuries, and a total of 3,017 crashes.

The work of the City of Kamloops, ICBC, RCMP, and other stakeholders has been summarized in the document entitled *Kamloops Safer City Plan (2003)*. This plan sets out the objectives of the Safer City Program, reviews the work undertaken to date, and provides an action plan to support the ongoing implementation of Safer City initiatives.

- 2.1 The City's major road network (Ministry of Highways grid road plan) is identified on Map 5, including existing and future arterial routes.
- 2.2 The City's Integrated Land Use and Transportation Plan *TravelSmart (1999)* provides detailed guidance for future development of the City's street network and transportation system. The City's transportation goals are as follows:
  - maintain mobility levels as Kamloops grows by means of a transportation system which is effective, yet affordable;

- integrate land use planning with transportation planning by managing future development patterns in a manner which minimizes the rate of increase in travel demand;
- develop a transportation system and pattern of community development which are amenable to alternatives to provide choices as to where people can live and their mode of travel, including the private automobile, public transit, cycling, and walking;
- strive for further reductions in the rate of increase in travel demand through implementation of other feasible travel demand management techniques tailored to Kamloops;
- protect the integrity of the provincial highway corridors within Kamloops to facilitate through traffic;
- recognize the linkage between the goal of environmental sustainability and an integrated transportation and land use planning system aimed at reducing the rate of increase in travel demand; and
- ensure compatibility of transportation corridors and facilities with adjacent land uses and the overall character and image of the community.

2.3 The City's Road Network Classification system is based on the following hierarchy:

- provincial highways,
- arterials,
- collectors, and
- local streets.

The provincial highway network is intended to carry provincial traffic and traffic through urban centres. Traffic that originates in Kamloops and is destined to locations within Kamloops is intended to use the City's arterial road network, shown on the road network plan (Map 5).

2.3.1 Arterial routes move traffic from one part of the City to another. Collector routes link local streets with arterials and provide access to abutting properties. Local streets provide access to abutting properties. In planning for new developments or redevelopment, the City will encourage the following:

- single family residential units should not have direct access to arterials, and access to collectors should be discouraged;
- through traffic should be discouraged from using local streets; and
- truck routes and industrial traffic should be restricted to designated arterials and appropriate industrial collectors.

- 2.3.2 The City will develop an Access Management Plan within the term of this plan.
- 2.3.3 The provincial Agricultural Land Commission may not have agreed to all alignments shown within the Agricultural Land Reserve (ALR). The City will work with the Commission to fine-tune alignments and the ALR boundary and attempt to resolve areas of conflict. Any road extending into the ALR requires approval of the Agricultural Land Commission.
- 2.4 No additional river crossings are anticipated within the term of this plan, although upgrading and rehabilitation of existing bridges may be required from time to time.
  - 2.4.1 While the Red Bridge is not within the City's control, the City recognizes the importance of a river crossing in this general vicinity and supports its continued rehabilitation or potential replacement. The preferred alignment for a replacement to the Red Bridge would connect the KIB to the City's road network at Lorne Street. It may be desirable to retain the Red Bridge as a pedestrian/bicycle link at such time as it is decommissioned as a vehicle bridge.
  - 2.4.2 Alignments to connect Lorne Street to the South Shore/City Centre area will be reviewed in the future as the need arises.
  - 2.4.3 Beyond the 120,000 population horizon, the City will continue to protect the Singh Bridge corridor from the Summit extension to Ord Road.
- 2.5 At the time of rezoning, subdivision, or development, the City shall ensure that alignments for all necessary streets are acquired (arterial, collectors, and local) in accordance with the terms and conditions of the *Local Government Act* and the *Land Title Act*.

- 2.5.1 The road network in new plans of subdivision should reflect the overall transportation plan for the community and, where feasible, enable properties to be within 300 m walking distance of a transit stop.
- 2.6 The City will require a transportation impact study to be prepared in support of applications for significant development. Listed below are examples of issues to include in a transportation impact study:
- 2.6.1 A multi-modal approach to provision of transportation infrastructure in new developments to achieve a reasonable balance between auto, transit, and non-motorized modes of travel.
- 2.6.2 Impacts of development traffic on the capacity of adjacent, and nearby, transportation corridors accounting for the anticipated growth in levels of background traffic.
- 2.6.3 Identifying the need for modifications to the transportation infrastructure to support and/or accommodate new development including modifications to the transit network and facilities for non-motorized modes of travel.
- 2.6.4 Consideration of the potential for Travel Demand Management (TDM) measures in new developments.
- 2.6.5 Take into account both the influence of anticipated future development in the surrounding area, as well as any planned infrastructure modifications.
- 2.7 A number of arterial road projects are required to provide access to lands zoned for residential development or identified as Special Development Areas within the term of this plan. The timing of these projects is dependent upon the rate of development activity. The projects include:
- Grasslands Boulevard extension to McQueen Drive,
  - Highland Drive access/capacity enhancements,
  - Qu'Appelle Boulevard to Rose Hill Road,
  - Valleyview Drive extension to Jimeva Farms,
  - Copperhead Drive extensions to Aberdeen Drive and Cannel Drive,
  - Pacific Way upgrading,
  - Aberdeen Drive upgrading and/or extension, and
  - Hugh Allan Drive extension to Pineview Valley.
- 2.8 The City will require developers within Special Development Areas to demonstrate cost-effectiveness prior to approving any extensions to the road network or upgrading which may be required to accommodate such

development. Developers will be required to make road improvements necessary to accommodate their developments at their cost.

2.9 Prior to the City's population reaching the 100,000 horizon in the year 2021, the following arterial road projects are considered necessary:

- Columbia Street road widening between 3rd Avenue and 6th Avenue (estimated cost - \$2 million); and
- Hillside Drive extension, west of Home Depot to Summit Drive (estimated cost - \$8.5 million).

In addition, the Ministry of Transportation has identified the need to construct an uphill climbing lane on the Trans Canada Highway between the Valleyview interchange and the Peterson Creek Bridge by the year 2021; however, financial and government priorities will determine rehabilitation schedules.

2.10 Prior to the City's population reaching the 120,000 population horizon, the construction of the 6th Avenue extension from Columbia Street to Summit Drive at Springhill Drive (estimated cost - \$20 million) will be required.

In addition, the Ministry of Transportation has identified the need to construct a Valleyview bypass on the benchlands between the Valleyview and Juniper neighbourhoods within this time frame, as shown on the Major Road Network Plan (Map 5). The City will continue to work with the Ministry to protect the alignment of this bypass. Biological inventories for ecosystems should be conducted and recommendations provided to reduce environmental impacts.

2.11 Beyond the 120,000 population horizon, the City will continue to protect the Halston Avenue corridor to allow for potential four laning between 8th Street and Kamloops Airport.

2.12 The City will continue to fund its rehabilitation program for arterials, collectors, and local streets primarily from general revenue (or reserves), with priorities allocated each year in accordance with the ongoing municipal pavement management analyses.

2.13 The City continue to address the need to have sidewalks and open space areas accessible through such features as gradual grade transitions and depressed curbs at street corners.

2.14 The City will continue to explore travel demand management programs and to encourage the increased use of transit as an alternative to the automobile and to increase mobility and access to community services for those unable to use an automobile, within funding constraints. The *Official Transit Plan 00-2020 (2000)* approved in principle by City Council

and incorporated as part of TravelSmart, outlines the specific goals and service objectives of the Kamloops Transit system.

2.14.1 The City will continue to work with Thompson Rivers University on the implementation of a U-Pass system, under which students will receive a transit pass as part of their student fees.

2.14.2 The City will work with major employers, such as Royal Inland Hospital or Weyerhaeuser, to explore the implementation of trip reduction programs such as the Pro-Pass transit program.

2.15 The City will pursue the development of a transit system based on three major transfer stations:

- the City Centre,
- Tranquille Market Street, and
- Thompson Rivers University.

As development of the Southeast Sector comes on stream, consideration will be given to a transit exchange in Valleyview.

2.16 The City will pursue the development of a continuous comprehensive pedestrian system in accordance with the *Pedestrian Master Plan (2002)*, which was adopted in principle by City Council in 2002. The plan was developed in association with ICBC as part of the Safer City initiative and has a major emphasis on promoting pedestrian safety. Promoting walking as a viable mode of transportation, as an alternative to the automobile, will have significant benefits for the health and well-being of Kamloops residents.

2.16.1 The City will continue to ensure that walkways and pedestrian linkages are provided in all new developments, particularly for sites where topography is a factor or for major destination points, and these shall be provided by the developer at the time of subdivision.

2.16.2 The City will refer development proposals to the Ministry of Transportation Thompson Nicola Transportation District when intersection conflicts and potential safety issues for the travelling public exist.

2.17 The City will continue to pursue the development of a continuous, integrated bicycle network in accordance with the *Bicycle Master Plan (2002)* in order to promote and encourage bicycling as a commuting alternative to the automobile and as a means of active recreation.

2.18 The City will encourage road safety through a broad range of transportation infrastructure improvement, education, enforcement, and other

initiatives designed to minimize the likelihood of unsafe situations arising between users of the transportation network. These initiatives are detailed in a report entitled *Kamloops Safer City Plan (2003)*. The recognition of interrelationships is fundamental to achieving road safety including the value of:

- links between road safety and the physical attributes of the transportation networks such as road form, access management, intersections, network planning and function, and traffic calming;
- travel demand management measures which reduce automobile travel and therefore the risk of collisions through the provision of safe pedestrian, bicycle, transit, and other facilities;
- connections between land use planning and road safety through the role of the community's land use pattern in reducing travel demands and maximizing safe travel routes; and
- partnerships involving all stakeholders.

- 2.19 The City will consider utilizing alternative street standards in new development areas, in conjunction with an overall development plan, in order to encourage a reduction in the impact of automobile traffic on neighbourhood liveability. In existing developed areas, traffic calming measures may be implemented.

### 3.0 WATER SYSTEM

In April 2003, the City began construction of a membrane filtration water treatment plant adjacent to the main water intake on River Street. The plant will be operational by the end of 2004 and will initially serve areas currently serviced by the central water system. Extension of treated water to the Southeast Sector and the Noble Creek area is scheduled for 2005 through the construction of trunk mains. The trunk main to the Southeast is expected to cost \$3.6 million and will be sized to provide water to development lands identified as Special Development Area (Jimeva Farms). The extension to Noble Creek will be restricted to serving existing properties with domestic and fire flow only.

- 3.1 Water conservation shall be encouraged through continuing the WaterSmart Program and watering restrictions. Usage shall be monitored, and if necessary, the City may consider implementing additional measures to reduce consumption, including water meters and enforcement. The primary purpose of the WaterSmart Program is to increase public awareness of the benefits of reducing water consumption and the associated potential to defer capital costs of major supply improvements.
- 3.2 The City will continue to show leadership in water conservation initiatives affecting City operation such as computerized irrigation systems tied to soil moisture and evaporation rates. The City will encourage other

government agencies in the private sector to adopt similar water conservation practices.

3.3 For the term of this plan, the City's water system will not be extended beyond:

- the municipal boundary (with the possible exception of the KIB lands for emergency purposes only),
- existing service limits, or
- the designated Special Development Areas identified on Map 1,

in order to support redevelopment of existing **Urban** lands, intensification, infill development and discouraging peripheral expansion.

3.4 Existing private water systems in Rayleigh and Heffley Creek shall be retained for the term of this plan. The City will not permit the establishment of new private water systems within the City.

3.5 The City will require developers within Special Development Areas to demonstrate cost-effectiveness prior to approving any water extensions or system upgrading which may be required to accommodate such development. The cost of such extension or upgrading shall be borne by the developer.

3.6 The City will continue to work co-operatively with senior government and other agencies to monitor and improve conditions in the South Thompson River watershed. Watershed management is important for two reasons: it is environmentally responsible; and the cleaner the water entering the water treatment plant, the less it will cost for treatment and ongoing maintenance.

3.7 The City will implement an Asset Management system to identify the age and condition of all water mains throughout the City. This will assist in identifying priorities for upgrading and maintenance of the water system.

3.8 The City is continuing to pursue the construction of an emergency water supply. The preferred option is currently under review.

## 4.0 SANITARY SEWER

Wastewater from the majority of neighbourhoods in the City (from all areas designated urban residential and the suburban areas of Dallas and central Barnhartvale) is collected and treated at the central treatment plant located on Mission Flats Road. After treatment, wastewater is either discharged to the river (60%), discharged in rapid infiltration beds (20%), or used as spray irrigation on the Cinnamon Ridge site (20%). The amount of effluent that can be discharged by spray irrigation increases above 20% during hot, dry summers.

The Raleigh neighbourhood uses a combination of communal septic fields and individual septic tanks. Elsewhere in the City, individual septic tanks are the primary means of disposing of wastewater. It is anticipated that the sewer collection system will be extended to the Rose Hill and Karindale neighbourhoods within the term of this plan. In the longer term, Raleigh may also be connected to the system.

Since 1999, the City has been involved in a comprehensive review of its wastewater treatment facilities. The Liquid Waste Management Plan (LWMP) examined alternate methods to reduce ammonia and phosphorus being discharged as effluent through biological nutrient removal (BNR) or partial BNR (with the potential for upgrading to full BNR if required), and a variety of discharge options including spray irrigation. The study also examined the impact of these treatment methods on the Thompson River system. Both senior levels of government have agreed to the proposed levels of discharge from a partial BNR plant subject to a monitoring program and upgrades, if required. The proposed partial BNR plant still requires formal Council and provincial government approval. The plant is estimated to cost between \$25 and \$30 million, which is less than half the cost of a full BNR plant. Construction is scheduled to begin in 2006, with the plant being fully operational by 2007.

The City is also constructing a sludge dewatering plant. Sludge from Mission Flats will be dewatered, then trucked to Cinnamon Ridge to be co-composted with yard waste. The resulting compost can be applied to land as a nutrient supplement and may be available to the public. A co-composting pilot was undertaken in 2003 and is expected to be fully operational in 2004. Cost of the dewatering facility is \$3.6 million.

4.1 The City plans to continue use of the central collection and disposal system as its primary means of sewage disposal. The existing system is estimated to support a city-wide population of 100,000 with significant upgrading and expansion of the effluent disposal system in accordance with the recommendations of the Liquid Waste Management Plan.

4.1.1 Construct a partial BNR plant (estimated cost \$25 to \$30 million) in accordance with the Liquid Waste Management Plan.

- 4.2 The City shall continue to pursue innovative ways of treating and disposing of effluent including, but not limited to, biological nutrient removal, spray irrigation, rapid infiltration, and wetlands development.
- 4.3 Suburban and rural areas (except Dallas and central Barnhartvale) shall continue to use septic tanks as the primary means of disposing of sewage effluent. Holding tanks will be prohibited as a permanent long-term solution. Development will be prohibited where topography or soil conditions are not suitable for ground disposal.
- 4.4 Hazardous wastes or contaminants shall not be discharged to ground disposal.
- 4.5 The City's central system will not be extended beyond current limits and those Special Development Areas designated for future development on Map 1 within the term of this plan.
  - 4.5.1 Notwithstanding policy 4.5 above, the City will co-operate with the KIB to provide sanitary sewer servicing for development lands within the Reserve. An agreement has been approved by both Councils that provides for sanitary sewer collection and disposal for the KIB lands. The agreement provides for the acceptance, treatment, and disposal of effluent from serviced lands up to but not exceeding 6,000 dwelling units or equivalent.
- 4.6 The City will require developers within Special Development Areas to demonstrate cost-effectiveness prior to approving any extensions to the sanitary sewer system or upgrading which may be required to accommodate such development. Applicants will be required to make sanitary sewer system improvements necessary to accommodate their developments at their cost.
- 4.7 The City will implement an Asset Management system to identify the age and condition of the City's sanitary sewer system to identify priorities for upgrading and improving the system.

## 5.0 STORM DRAINAGE

In the City of Kamloops, storm water management takes an integrated approach to the planning, design, implementation, and operation of the storm water drainage infrastructure which seeks to balance drainage efficiency and functional operation while striving to maintain environmental values. The City's storm water management objectives include:

- the protection of life and property;
- conservation of natural, human, and financial resources;
- provision of infrastructure and services to benefit the community;
- sustainable development by encompassing an integrated approach to storm water management;
- orderly development and integration of land uses; and
- preservation and improvement of natural environmental features.

Significant storm water improvement projects within the last several years include the creation or enhancement of storm water detention ponds on Ord Road at Singh Street and Ord Road west, Batchelor Hills with two ponds in the Lac du Bois area, Mt. Dufferin pond, Gamble pond, and Makao Lake above Aberdeen. Channel stabilization has been undertaken on Guerin Creek and Peterson Creek, and overland flood routing was developed in some areas of Lower Sahali. In Valleyview, the Oriole Road storm water pump station was upgraded, and in Westsyde, drainage improvements were constructed at Anderson Terrace and along Westsyde Road.

- 5.1 The City shall continue to use the existing natural drainage pattern as the primary storm drainage system. Natural watercourses shall be protected from encroaching development and enhanced and improved where necessary. The City will continue to use stormwater detention/retention facilities as its principal means of meeting the objective of maintaining postdevelopment flows at predevelopment levels. In addition, overland flood routing to major drainage features will be incorporated into new development.
- 5.2 The City will revise the Master Drainage Plan on a regular basis and shall establish an appropriate level of protection for each drainage basin, taking into consideration the cost of improvements, potential for loss of life and personal property damage, and the management of the municipality's risk and liability.
- 5.3 Funding for major storm drainage components shall continue to be provided from general revenue and from DCC Reserve Funds. Local benefit projects (minor improvements) will be financed by way of local improvement/specified area and will be carried out where possible in conjunction with street upgrading projects.

- 5.4 The City will require developers within Special Development Areas to demonstrate cost-effectiveness prior to approving any extensions to the storm drainage system or upgrading which may be required to accommodate such development. Developers will be required to make drainage improvements necessary to accommodate their developments at their cost.
- 5.5 The City, in conjunction with senior levels of government, shall work towards implementing surface runoff management methods that effectively address water quality issues prior to discharge into the receiving waters. The City may require new development to undertake on-site siltation control measures where runoff could enter the stormwater system or could damage nearby ecosystems.
- 5.6 The City shall require that the appropriate provincial and federal ministries review new development proposals that are affected by the existence of natural watercourses. The Ministry of Water, Land and Air Protection is in the process of developing best management practices. The Ministry will be shifting from reviewing development plans to measuring the success of the best management practice applications and compliance with existing regulations.

## 6.0 SOLID WASTE

Sanitary landfill sites are shown on Map 1, Generalized Land Use 2003-2021, including the Cinnamon Ridge composting facility.

- 6.1 The City will continue to work with the TNRD to implement and update the Regional Solid Waste Management Plan in partnership with the Regional Solid Waste Monitoring Committee.
- 6.2 The City shall continue to pursue the goal of a 50% reduction in the amount of solid waste going to landfills, in accordance with provincial guidelines and the Regional Waste Management Plan. The City will continue to use a variety of approaches including:
- public education, promotion, advertising;
  - encouraging recycling through the operation of recycling depots;
  - encouraging home composting;
  - encouraging the use of the Cinnamon Ridge composting facility as well as the McGill Road and Barnhartvale yard waste drop-off sites;
  - restricting curbside pickup; and
  - user fees/rates.
- 6.3 The City will continue to use Mission Flats as the primary landfill site.

## 7.0 ENVIRONMENTAL MANAGEMENT SYSTEM

In 2001, the City undertook a comprehensive review of the *State of the Environment Report (1996)* to update the report and to recommend appropriate amendments, including the need for key environmental indicators that could be used to monitor future progress. The review also looked at the structure and organization of the Task Force on the Environment to clarify its roles and responsibilities. The result was a complete overhaul of the City's environmental management and monitoring system.

The new Environmental Management System (EMS) is based on the need to develop an "achievable and understandable long-term environmental strategy using a consultative, balanced, and integrated approach". The EMS recognizes the need to coordinate environmental services to reduce the environmental impacts of City operations; to better monitor and evaluate the long-term economic, environmental, and social costs of City actions; and to accelerate the adoption of more sustainable practices by Kamloops businesses, institutions, households, and residents. Unlike the previous *State of the Environment Report*, the new EMS focuses on City operations and what the City can achieve within its sphere of operations. It also emphasizes the need for ongoing monitoring and improvement to the EMS program.

The EMS will be monitored by two committees: an internal Environmental Strategy Team and an external Environmental Performance Advisory Committee. The Environmental Strategy Team will facilitate interdepartmental coordination and integrated problem solving based on sustainability objectives and will prepare an annual Environmental Strategy Report, an annual Environmental Initiatives Report, and an annual Environmental Indicators Report, all of which will be reviewed by the external committee. The external committee will also be responsible for an annual Environmental Performance Audit. The EMS structure and process were endorsed by City Council in 2002.

The EMS will begin as a pilot program in the solid waste management function and then be expanded to other City operations.

The City is already involved in a number of environmental initiatives as shown on the following table.

ENVIRONMENTAL INITIATIVES	
<p><b>CLIMATE, ENERGY, AND AIR QUALITY</b></p> <ul style="list-style-type: none"> <li>• Community Energy Plan</li> <li>• TravelSmart Program</li> <li>• Alternative Fuels</li> <li>• Building Retrofit Program</li> <li>• Backyard Burning Ban</li> <li>• Commuter Challenge</li> <li>• Partners for Climate Protection</li> </ul> <p><b>SOLID WASTE</b></p> <ul style="list-style-type: none"> <li>• Regional Solid Waste Management Plan</li> <li>• Internal Annual Audit of Waste Management Activities</li> <li>• Internal Three R's Program</li> <li>• Drop Off Recycling Depots</li> <li>• Mission Flats Recycling including Drop 'n Shop</li> <li>• Consumer Product Stewardship Program</li> <li>• Garbage Collection and Disposal</li> <li>• Cinnamon Ridge Compost Facility</li> <li>• Yard Waste Drop-Off sites</li> <li>• Christmas Tree Recycling</li> <li>• Grass Cycling</li> </ul> <p><b>LIQUID WASTE</b></p> <ul style="list-style-type: none"> <li>• Liquid Waste Management Plan</li> <li>• Wastewater Treatment, Monitoring, and Upgrades</li> <li>• Reuse of Effluent (Spray Irrigation) and Biosolids</li> <li>• Leachate Monitoring</li> <li>• Storm Water Management and Monitoring</li> </ul> <p><b>DRINKING WATER</b></p> <ul style="list-style-type: none"> <li>• Water Treatment Plant Construction including LEED Certification</li> <li>• Drinking Water Quality Monitoring Program</li> </ul>	<p><b>WATER CONSERVATION</b></p> <ul style="list-style-type: none"> <li>• WaterSmart Public Education Program</li> <li>• Xeriscape Demonstration Garden</li> <li>• Water Use Efficiency Committee</li> <li>• Watering Restrictions</li> <li>• Computerized Irrigation in City Parks</li> <li>• Parks Naturalization Program</li> </ul> <p><b>POLLUTION PREVENTION AND WATERSHED</b></p> <ul style="list-style-type: none"> <li>• Environmental Management System</li> <li>• Non-point Source Pollution Public Education Program</li> <li>• Environmental Protection Handbook and Training Program</li> <li>• Habitat Conservation Stewardship Program</li> <li>• Interagency Team on Environmental Protection</li> <li>• Participation in Fraser Basin Council, Watershed Committees, and Bear Aware</li> <li>• Community Greenways Pilot Program</li> </ul> <p><b>PARKS</b></p> <ul style="list-style-type: none"> <li>• Integrated Pest Management Plan</li> <li>• Kenna Cartwright Restoration and Education Program</li> <li>• Peterson Creek Management Plan</li> <li>• Communities in Bloom</li> <li>• Urban Forestry Program</li> <li>• Adopt-A-Road</li> </ul> <p><b>DEVELOPMENT SERVICES</b></p> <ul style="list-style-type: none"> <li>• South Thompson Settlement Strategy</li> </ul>

- 7.1 The City is committed to becoming an environmentally sustainable community by:
- working in a manner that encourages environmental sustainability through leadership, stakeholder and City consultation, and integration with programs and initiatives;
  - meeting or exceeding environmental regulatory requirements;
  - preventing pollution through planning, pre-design, life cycle analysis, green procurement, and related activities;
  - ensuring co-operation, communication, and education among City staff, Council, and key stakeholders to inform environmental management objectives;
  - having financial accountability for responsible environmental management;
  - encouraging continual improvement through taking action to correct or improve environmental conditions; and
  - implementing and continually improving the Environmental Management System for operational effectiveness to fulfill the City's environmental objectives.